



CSW Controller Unit - Photocell, Fault Monitoring, Switch-over and Flash, GPS, GSM.

CEL-CSW-DCW-B-F - Four Output Channels

CSW controller units are used for controlling and monitoring VDC operated aviation warning lights. The CSW has 4 independent outputs for monitoring lights independently. Output fault monitoring is based on power consumption. Alarm setup selected with dial switches independently. This unit can control the flash sequence and day/night mode for the lights. GPS flash synchronisation and GSM monitoring are available as options.

Key features

- 4 independent outputs with current monitoring at each output
- Internal photocell, external photocell option (CEL-PCE-DCW-F)
- Several flashing modes
- Global flash sequence synchronisation with GPS
- Main/spare switch-over
- Alarm output (dry contact)
- GSM fault monitoring system available (SMS alarms)
- Main/spare switch-over

Mechanical Characteristics

- Shock-resistant polycarbonate enclosure (IP65)
- Enclosure dimensions (WxHxD): 300mm x 200mm x 132mm
- Weight 1.9kg
- Cable glands: 5 x M25 (9-17mm cable diameter) and 2 x M16 (4.5-10mm cable diameter)

Electrical characteristics

- Wide operating voltage range 10VDC to 60VDC
- User-selectable operating parameters
- Internal selectable photocell - OFF / 400 lx / 800 lx / 1600 lx
- External photocell - OFF / 400 lx / 800 lx
- Fault monitoring based on power consumption outputs
- Maximum continuous current 6A per output
- Power consumption <1W
- Operating temperature range -40°C ...+55°C

Flash modes

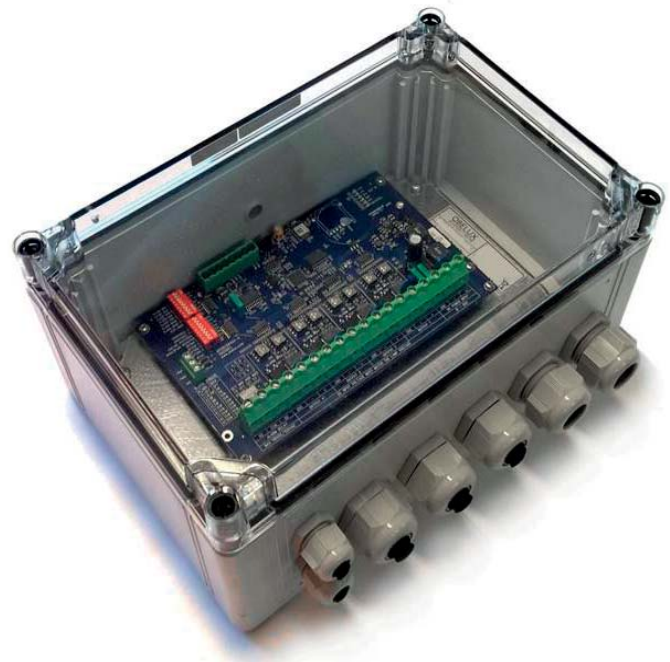
- Steady burning / 20fpm / 30fpm / 40fpm / 60fpm
- Flash duration - 100ms / 250ms / 500ms
- ICAO/FAA sequential flash

Alarm Relay Characteristics

- Normally Open (NO) & Normally Closed (NC)
- Active when powered
- Switch voltage (max) 110VDC or 125VAC
- Switch current (max): 1A
- Switch power (max): 30W
- Contact resistance: 0.1 ohm

Made in EU

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Options

- GPS receiver (with on-board internal antenna)
- GSM modem (for SMS messaging)
- External GPS Antenna (see order codes on last page)

Order code	Current	GPS	GSM
CEL CSW-DCW-B-F	4 * 0.5A	-	-
CEL CSW-DCW-B-G	4 * 0.5A	X	-
CEL CSW-DCW-B-G3	4 * 0.5A	X	-
CEL CSW-DCW-B-G5	4 * 0.5A	X	-
CEL CSW-DCW-B-G10	4 * 0.5A	X	-
CEL CSW-DCW-B-G-GSM	4 * 0.5A	X	X

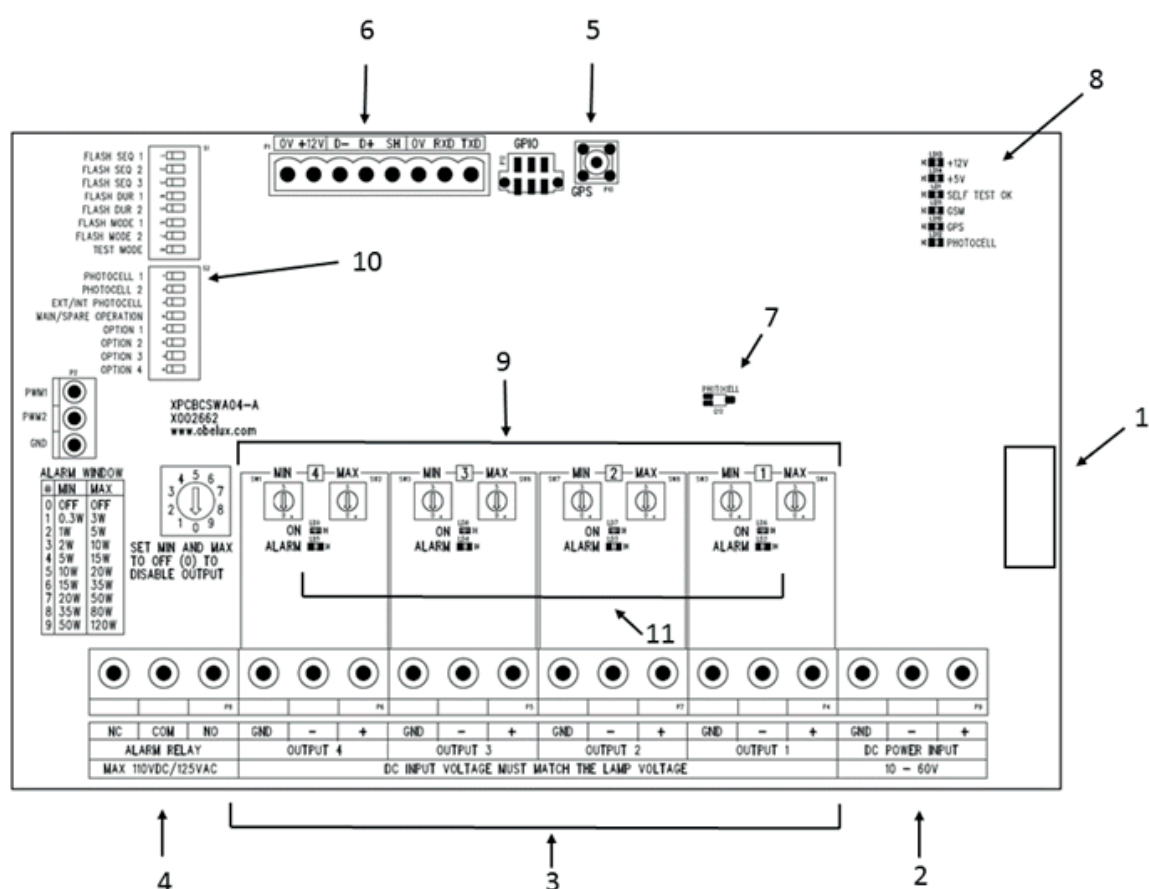
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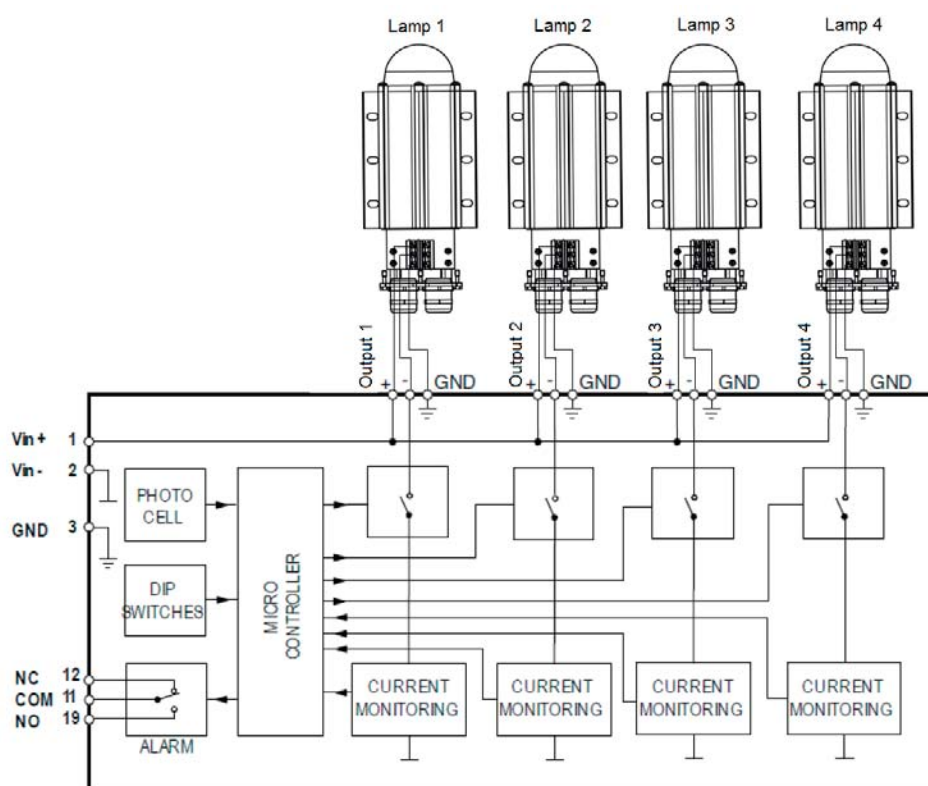


Controller module

1. CSW-DCW Application software version label
2. DC power input
3. Output connectors (four channels)
4. Alarm relay output connector
5. GPS External Antenna connector
6. External photocell data and power connection. Power supply and data to GSM modem.
7. Internal photocell
8. Status LEDs
9. Rotary DIP switches to set power monitoring window for each output channel
10. Configuration DIP switches (two switch blocks with eight switches in each)
11. Status LEDs for alarms.

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CSW Four-Output Series Block diagram

Description of operation

The CSW controller measures the current consumption of the operational output every 0,5 seconds. If five consecutive inaccurate measurements are recorded, the output is switched off, an alarm is generated and the second output (if selected) is taken into use.

After 30 minutes the CSW controller will attempt to switch the first (faulty) output back on, makes five measurements, and if the fault is cleared, the alarm is turned off. If it is still faulty the alarm stays on and the second output (if selected) is kept on. An alarm is also generated in case of power loss.

Remember always to check the DIP switch settings that output selections are correctly selected.

You may connect several light units to one single output, noting that the combined currents form the new current limits for correct controller operation.

If in built internal photocell is used, the unit must be installed outdoors according to requirements (e.g. facing north on Northern hemisphere).

ICAO/FAA Sequential flash mode for 3-light unit

According to ICAO Aerodrome Design Manual, Part 4, Visual Aids, fourth edition - 2004 and FAA AC 150/5345-43F, 09/12/06:

German BMVB Flash Sequence

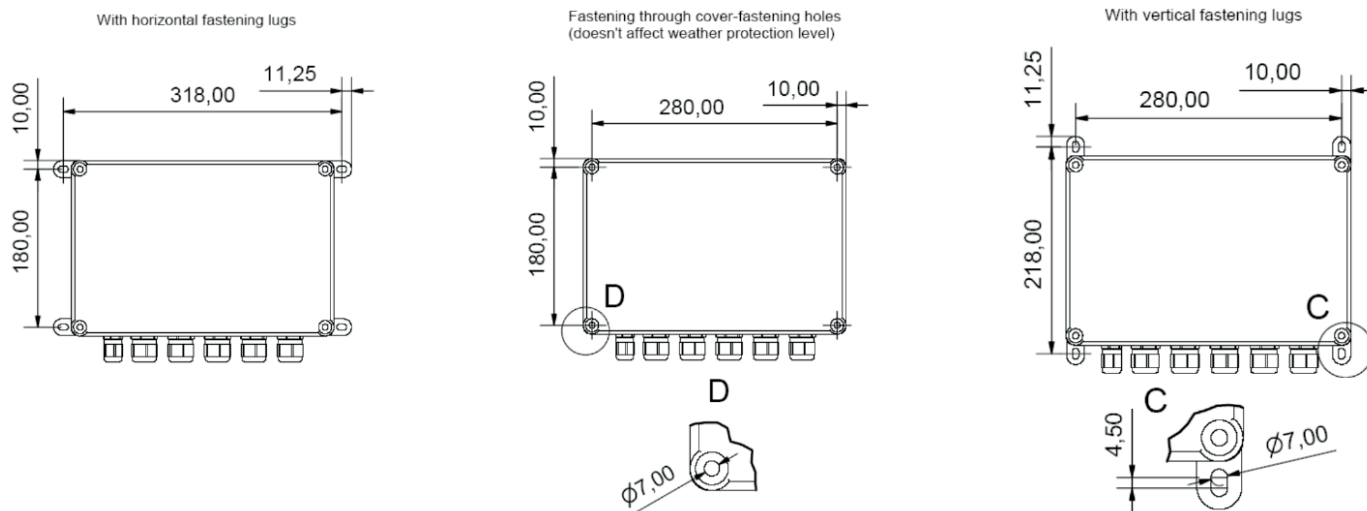
Polish Flash Sequence

Multiple CSW's flash synchronisation

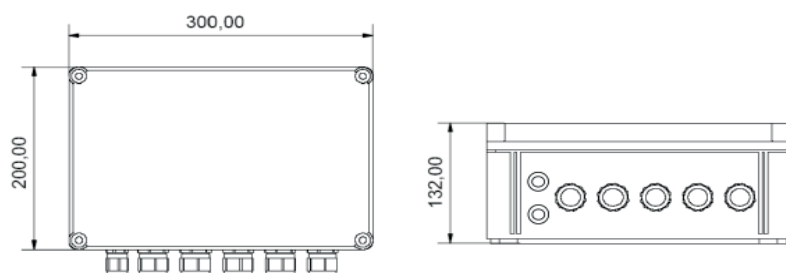
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Mounting with vertical fastening lugs



Mounting with horizontal fastening lugs



Order Code	GPS Synchronisation	GSM Monitoring	GPS Antenna Cable	Operating Voltage	Power Consumption	Packing Dimensions
CSW-DCW-B-F	No	No	NA	10-60 VDC	<1W	330 x 320 x 150mm, 2.4kg
CSW-DCW-B-G	Yes	No	NA	10-60 VDC	<1W	330 x 320 x 150mm, 2.5kg
CSW-DCW-B-G3	Yes	No	3m	10-60 VDC	<1W	330 x 320 x 150mm, 2.5kg
CSW-DCW-B-G5	Yes	No	5m	10-60 VDC	<1W	330 x 320 x 150mm, 2.5kg
CSW-DCW-B-G10	Yes	No	10m	10-60 VDC	<1W	330 x 320 x 150mm, 2.5kg
CSW-DCW-B-G-GSM	No	Yes	NA	10-60 VDC	<1W	330 x 320 x 150mm, 2.5kg
CSW-DCW-B-G-GSM	Yes	Yes	NA	10-60 VDC	<1W	330 x 320 x 150mm, 2.6kg